



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
RESEARCH TRIANGLE PARK, NC 27711

December 21, 1999

OFFICE OF
AIR QUALITY PLANNING
AND STANDARDS

MEMORANDUM

SUBJECT: Use of Collocated PM_{2.5} Data and Parameter Occurrence Codes

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TO: Deputy Director, Office of Ecosystem Protection, Region I
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This memorandum formally transmits supplementary guidance on the use of PM_{2.5} data produced at collocated PM_{2.5} samplers and the use of parameter occurrence codes (POC's).

Collocated Data

The new guidance is intended to clarify any potential ambiguities in the QA Handbook Method 2.12 and to conform with a July 24, 1989 memorandum on the handling of PM₁₀

collocated data. Section 13.4.1 in the April 1998 version of the *Quality Assurance Guidance Document 2.12* states that:

“Under no circumstances should data from the collocated sampler be reported as coming from the reporting sampler.”

This statement was an attempt to ensure that one could identify when collocated data, versus the primary sampler data, was used for reporting purposes. It was not intended to disallow the use of the collocated data if the primary sampler was not operating or for some reason, invalidated.

Since 40 CFR Part 58 Appendix A Section 3.5.2 States: “A monitor designated as an EPA FRM shall be collocated with a monitor having the same EPA FRM designation,” it implies that both samplers are operating independently, have the same operating characteristics, and as long as they are within the precision acceptance requirements, can be considered repeatable and unbiased.

Accordingly, data from a collocated sampler can be substituted for the primary sampler if the primary sampler was not operating or did not produce a valid measurement for that same day.

In order to distinguish the fact that the collocated data were substituted for the primary sampler, OAQPS suggests designating the collocated data with a POC of “2” in AIRS. This designation will also facilitate our review of data completeness for precision data since the collocated value would no longer show up in a precision transaction if it was substituted for the primary sampler. Since POC codes have not been designated for specific types of samples in the past, this guidance may not adequately apply to all situations in the current AIRS since a POC of “2” may already be in use at some PM_{2.5} sites (see Table 2, attached).

Use of Parameter Occurrence Codes

As the amount of PM_{2.5} data reported to AIRS increases in both the number of stations and the number of monitors at any one station, the need to ensure a uniform coding structure for reporting becomes more important. This is essential for both data reviewers and analysts who may not be intimately familiar with any one agency’s network design. Having a uniform coding structure will ensure that data are efficiently accessible for its intended use across multiple reporting agencies.

All of the codes for reporting PM_{2.5} data can be found on-line in AIRS Geocommon. These codes are also available on the TTN Internet site in both the AIRS section at: <http://www.epa.gov/ttn/airs/memos.html#AQS> Memos and the PM_{2.5} section at: <http://www.epa.gov/ttn/amtic/datamang.html>. These codes provide for appropriate identification of the data for things such as the parameter, method, interval, and units code. While codes such as these ensure that data from any one site are appropriately identified, they do not provide for an

efficient analysis of data across multiple reporting agencies. In order to provide for efficiency in data analysis, the OAQPS is instituting this nonbinding guidance for use of the POC. By having consistency in which POC is assigned to PM_{2.5} data, a large efficiency will be gained in data review and analysis.

The purpose of the POC is identified in the AIRS User's Guide Volume AQ2, Air Quality Data Coding, section 5.1.2. POC (Parameter Occurrence Code). "POC is a code used to distinguish between different monitors at one site that are measuring the (same) parameter." In the legacy AIRS, the POC is a required 1 digit code to be entered into column 16 of the raw data transaction. The POC can be a number in the range of 1 through 9. In the re-engineered AIRS system, a two-digit POC will be available.

Table 1 (attached) identifies the appropriate use of each POC.

Currently, most of the data reported to AIRS is FRM data and most of that data does have POC's consistent with the table above. Table 2 contains a list of sites that have more than one POC and also identifies sites that do not have a POC 1. For example, AIRS Site ID 20900010 has no POC 1 site but does record data for a POC 2. For those agencies that are not using the POC formats as in Table 1, OAQPS and the Regions will work to provide a smooth transition to these formats.

(2) Attachments

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Table 1. Appropriate Use of Each POC for PM_{2.5}

Parameter of Occurrence Code (POC)	Type of data to be submitted	Notes
1	FRM Primary sampler	If multiple single channel samplers are used to capture daily sampling, all would still be reported as a POC 1.
2	FRM Collocated sampler	Use of this POC is optional since collocated data is submitted under the precision transaction. However, some Agencies choose to submit their collocated data as raw data. For these Agencies, this POC would be preferred.
3	First continuous PM _{2.5} sampler. (Not an FEM)	Usually reported as 1 hour data.
4	Any collocated continuous PM _{2.5} sampler. (Not an FEM)	Does not have to be same make or model as the POC 3 sampler.
5	First Speciation NAMS sampler. (Not an FRM or FEM)	POC 5 was previously identified in the AIRS speciation data management issues paper.
6	Collocated Speciation NAMS sampler. (Not an FRM or FEM)	POC 6 was previously identified in the AIRS speciation data management issues paper.
7	Other PM _{2.5} sampler	
8	Other PM _{2.5} sampler	
9	Other QA PM _{2.5} sampler	

Table 2. Multiple POCs Being Used at a Site, or Sites where POC 1 is Not Being Used

AIRS ID	POC	Observations	Reporting Organization
10970002	1	24	Al Dept. Of Env. Mgt.
10970002	2	14	Al Dept. Of Env. Mgt.
11010007	1	27	Al Dept. Of Env. Mgt.
11010007	2	15	Al Dept. Of Env. Mgt.
20900010	2	34	Alaska Department of Environmental Conservation
60170011	1	14	California Air Resources Board
60170011	2	14	California Air Resources Board
60190008	3	28	California Air Resources Board
60190008	4	19	California Air Resources Board
60631008	2	2	California Air Resources Board
60670006	1	29	California Air Resources Board
60670006	2	9	California Air Resources Board
60670010	2	29	California Air Resources Board
60771002	2	30	California Air Resources Board
60990005	2	30	California Air Resources Board
61010003	1	15	California Air Resources Board
61010003	2	15	California Air Resources Board
61072002	2	26	California Air Resources Board
90010010	1	40	Connecticut Department of Environmental
90010010	9	42	Connecticut Department of Environmental
90019003	2	16	Connecticut Department of Environmental
90090018	1	46	Connecticut Department of Environmental
90090018	9	40	Connecticut Department of Environmental
90091123	1	42	Connecticut Department of Environmental
90091123	9	31	Connecticut Department of Environmental
90092123	1	47	Connecticut Department of Environmental
90092123	9	38	Connecticut Department of Environmental
180431004	1	25	Indiana Dept of Environ Management/off
180431004	2	14	Indiana Dept of Environ Management/off
180891016	1	109	Indiana Dept of Environ Management/off
180891016	2	8	Indiana Dept of Environ Management/off
180950009	1	15	Indiana Dept of Environ Management/off
180950009	2	7	Indiana Dept of Environ Management/off
181411008	1	5	Indiana Dept of Environ Management/off
181411008	2	3	Indiana Dept of Environ Management/off
181630006	1	6	Indiana Dept of Environ Management/off
181630006	2	3	Indiana Dept of Environ Management/off
180970081	1	116	Indianapolis Division of Air Pollution c
180970081	2	17	Indianapolis Division of Air Pollution c
180970083	1	122	Indianapolis Division of Air Pollution c
180970083	2	18	Indianapolis Division of Air Pollution c
211110043	1	250	Jefferson County Air Pollution Control d
211110043	2	43	Jefferson County Air Pollution Control d
200910007	1	33	Kansas Department of Health and Environm
200910007	2	24	Kansas Department of Health and Environm
201070002	1	42	Kansas Department of Health and Environm
201070002	2	20	Kansas Department of Health and Environm
201730010	1	51	Kansas Department of Health and Environm
201730010	2	24	Kansas Department of Health and Environm

AIRS ID	POC	Observations	Reporting Organization
202090021	1	20	Kansas Department of Health and Environm
202090021	2	11	Kansas Department of Health and Environm
210190017	1	41	Kentucky Division for Air Quality
210190017	2	11	Kentucky Division for Air Quality
210590014	1	44	Kentucky Division for Air Quality
210590014	2	12	Kentucky Division for Air Quality
210670012	1	51	Kentucky Division for Air Quality
210670012	2	15	Kentucky Division for Air Quality
211950002	1	46	Kentucky Division for Air Quality
211950002	2	15	Kentucky Division for Air Quality
212270007	1	47	Kentucky Division for Air Quality
212270007	2	13	Kentucky Division for Air Quality
250130016	1	54	Mass Dept Environmental Protection-div a
250130016	2	56	Mass Dept Environmental Protection-div a
250210007	1	55	Mass Dept Environmental Protection-div a
250210007	2	2	Mass Dept Environmental Protection-div a
250230004	1	46	Mass Dept Environmental Protection-div a
250230004	2	46	Mass Dept Environmental Protection-div a
250250027	1	47	Mass Dept Environmental Protection-div a
250250027	2	34	Mass Dept Environmental Protection-div a
250270020	1	53	Mass Dept Environmental Protection-div a
250270020	2	54	Mass Dept Environmental Protection-div a
311090022	1	55	Nebraska Department of Environmental Con
311090022	2	27	Nebraska Department of Environmental Con
311530007	1	23	Nebraska Department of Environmental Con
311530007	2	17	Nebraska Department of Environmental Con
310550052	2	5	Omaha-douglas County Health Department
60250005	3	26	San Diego County Air Quality Management
60710014	3	24	San Diego County Air Quality Management
450190048	1	125	South Carolina Department Health and Env
450190048	2	21	South Carolina Department Health and Env
450370001	2	40	South Carolina Department Health and Env
450430009	1	69	South Carolina Department Health and Env
450430009	2	65	South Carolina Department Health and Env
450450009	1	86	South Carolina Department Health and Env
450450009	2	11	South Carolina Department Health and Env
450790019	1	79	South Carolina Department Health and Env
450790019	2	42	South Carolina Department Health and Env
60370002	2	77	South Coast Air Quality Management Distr
60371002	2	33	South Coast Air Quality Management Distr
60371103	2	62	South Coast Air Quality Management Distr
60371201	2	26	South Coast Air Quality Management Distr
60371301	2	38	South Coast Air Quality Management Distr
60371601	2	33	South Coast Air Quality Management Distr
60372005	2	20	South Coast Air Quality Management Distr
60374002	2	78	South Coast Air Quality Management Distr
60590001	2	81	South Coast Air Quality Management Distr
60651003	2	37	South Coast Air Quality Management Distr
60652002	2	31	South Coast Air Quality Management Distr
60658001	2	78	South Coast Air Quality Management Distr
60710025	2	40	South Coast Air Quality Management Distr
60712002	2	48	South Coast Air Quality Management Distr

AIRS ID	POC	Observations	Reporting Organization
60719004	2	38	South Coast Air Quality Management Distr
191630015	2	81	University Hygienic Laboratory
490350003	2	89	Utah Department of Environmental Quality
60195001	3	39	Ventura County APCD
60271003	3	46	Ventura County APCD
60271003	4	25	Ventura County APCD
60290010	3	40	Ventura County APCD
60290014	3	107	Ventura County APCD
60290014	4	23	Ventura County APCD
60310004	3	36	Ventura County APCD
60472510	3	9	Ventura County APCD
60792002	3	26	Ventura County APCD
60798001	3	30	Ventura County APCD
60798001	4	28	Ventura County APCD
60830010	3	28	Ventura County APCD
61110007	3	54	Ventura County APCD
61110007	4	28	Ventura County APCD
61112002	3	53	Ventura County APCD
61113001	3	48	Ventura County APCD